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IN THE CLAIMS

Amended claims follow:

1.   (Currently Amended) A method comprising:

determining a first set of suitable channels carrying optical signals in a first

direction and a second set of suitable channels carrying optical signals in a second,

opposite direction; and

comparing the second set of suitable channels against a channel in the first set of

suitable channels using matching criteria;

wherein a network management device is utilized to obtain configuration

parameters, and matching optical signals are outputted to the network management

device.

2.   (Original) The method of claim 1, wherein the determining comprises:

analyzing signal characteristics of channels in the first and second directions.

3.   (Original) The method of claim 2, wherein the determining further comprises:

selecting the channels in the first and second directions for analysis based on

quality criteria.

4.   (Original) The method of claim 2, wherein the determining further comprises:

detecting optical signals in the channels that represent a conversation of interest.

5.   (Original) The method of claim 2, wherein the determining further comprises:

accessing an optical fiber carrying signals in the first and second directions; and

extracting the channels from the optical fiber.

6.   (Original) The method of claim 2, wherein the determining further comprises:

accessing a first optical fiber carrying signals in the first direction and a second

optical fiber carrying signals in the second direction; and

extracting the channels from the first and second optical fibers.

7.   (Original) The method of claim 2, wherein the determining further comprises:

recording the signal characteristics of the channels in a data store.

8.   (Original) The method of claim 2 further comprising:

outputting the signal characteristics of the channels.

9.   (Original) The method of claim 1, wherein the matching criteria comprises:

a marker specific to a communications protocol layer.

10.   (Original) The method of claim 1 further comprising:

detecting a match between the channel in the first set of suitable channels and one

of the channels in the second set of suitable channels.

11.   (Currently Amended) The method of claim 10 further comprising:

outputting the match.

12.   (Original) The method of claim 1 further comprising:

repeating the comparing for another channel in the first set of suitable channels.

13.   (Original) The method of claim 1 further comprising:

obtaining the matching criteria.

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14.   (Original) The method of claim 1 further comprising:

obtaining signal characteristics that define a suitable channel.

15.   (Original) The method of claim 15, wherein the signal characteristics are selected from the group consisting of speed, protocol, and encoding.

16.   (Currently Amended) A computer-readable medium having executable instructions to cause a processor to execute a method comprising:

determining a first set of suitable channels carrying optical signals in a first direction and a second set of suitable channels carrying optical signals in a second, opposite direction; and

comparing the second set of suitable channels against a channel in the first set of suitable channels using matching criteria[.]; and

analyzing signal characteristics of channels in the first and second directions;

wherein a network management device is utilized to obtain configuration parameters, and matching optical signals are outputted to the network management device.

17.   (Currently Amended) The computer-readable medium of claim 1[5]6 wherein the method further comprises:

analyzing signal characteristics of channels in the first and second directions to determine the first and second set of suitable channels.

18.   (Currently Amended) The computer-readable medium of claim 1[6]7, wherein the method further comprises:

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selecting the channels in the first and second directions for analysis based on quality criteria.

19.   (Currently Amended) The computer-readable medium of claim 1[6]7, wherein the method further comprises:

detecting optical signals in the channels that represent a conversation of interest to determine the first and second set of suitable channels.

20.   (Cancelled)

21.   (Currently Amended) The computer-readable medium of claim 1[6]7, wherein the method further comprises:

recording the signal characteristics of the channels in a data store.

22.   (Currently Amended) The computer-readable medium of claim 1[6]7, wherein the method further comprises:

outputting the signal characteristics of the channels.

23.   (Currently Amended) The computer-readable medium of claim 1[5]6, wherein the method further comprises:

detecting a match between the channel in the first set of suitable channels and one of the channels in the second set of suitable channels. .

24.   (Currently Amended) The computer-readable medium of claim 2[2]3, wherein the method further comprises:

outputting the match.

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25.   (Currently Amended) The computer-readable medium of claim 1[5]6, wherein the method further comprises:

repeating the comparing for another channel in the first set of suitable channels.

26.   (Currently Amended) The computer-readable medium of claim 1[5]6, wherein the method further comprises:

obtaining the matching criteria.

27.   (Currently Amended) The computer-readable medium of claim 1[5]6, wherein the method further comprises:

obtaining signal characteristics that define a suitable channel.

28.   (Currently Amended) An apparatus comprising:

a plurality of optical wavelength filters to extract channels from a plurality of optical fibers;

a plurality of optical signal analyzers coupled to the plurality of optical wavelength filters to analyze signal characteristics of optical signals in the channels and further coupled to a data store to record the signal characteristics in the data store; and

a matcher coupled to the data store to determine sets of suitable channels based on the signal characteristics and further coupled to the plurality of optical wavelength filters to detect matching optical signals in the sets using matching criteria;

wherein the matcher selectively couples to a network management device to obtain configuration parameters and to output the matching optical signals to the network management device.

29.   (Currently Amended) The apparatus of claim 2[7]8 further comprising:

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a plurality of optical taps coupled to the plurality of optical wavelength filters to provide access to the channels in the plurality of optical fibers.

30.   (Cancelled)

31.   (Currently Amended) A system comprising:

a processor for coupling to an optical network; and

an identification process executed by the processor to cause the processor to analyze signal characteristics of optical signals in channels in the optical network, to determine sets of suitable channels based on the signal characteristics, and to detect matching optical signals in the sets using matching criteria;

wherein a network management device is utilized to obtain configuration parameters, and the matching optical signals are outputted to the network management device.